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ABSTRACT

This paper examines how competing demands for accountability in public education are grounded in different visions of the role of education in a democratic society. It also suggests that accountability in education is being profoundly shaped by the technological revolution. While some contradictions in accountability stem from different goals for education, other contradictions arise simply because technology has made data acquisition and access, information production, and communication about educational outcomes easier. The paper examines how competing visions of democracy influence the understanding of the purposes of public education and the understanding of what accountability is and how it might be achieved. It also looks at how technology advances foster accountability by helping determine whether different educational purposes are being achieved. Lastly, it urges educational administrators to resist the lure of technology as the siren song of accountability, however it may be envisioned. Educational leadership programs can help administrators use technology to improve the ability to communicate clearly about educational outcomes that will support educational reform and productivity in the field. (Contains 16 references.) (DFR)

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Balancing Competing Demands for Accountability:

Technology's Role in Information Access and Production

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Introduction

In this paper we examine how competing demands for accountability in public education are grounded in different visions of the role of education in a democratic society. We also suggest that accountability in education is being profoundly shaped by the technological revolution of recent years. While some contradictions in accountability stem from different goals for education; other contradictions arise simply because technology has made data acquisition and access, information production, and communication about educational outcomes easier.

First, we examine how competing visions of democracy influence our understanding of the purposes of public education and our understanding of what accountability is and how it might be achieved. Second, we examine how technology advances foster accountability by helping us determine whether different educational purposes are being achieved. Third, we urge educational administrators to resist the lure of technology as the siren song of accountability however it may be envisioned. If we are not thoughtful in how technology is applied to produce information that can be readily communicated and understood, technology advances may only serve to exacerbate our confusion about educational outcomes.

In concluding remarks, we examine how educational leadership preparation is being influenced, or perhaps more appropriately, how it *should be influenced*, by technology advances. We assert that educational leadership programs can help administrators use technology to improve our ability to communicate clearly about

educational outcomes that will support educational reform and productivity in the field. We also argue that continued reliance on acquiring technical skills may only encourage practitioners to increase the amount of information produced with the unfortunate negative side effect of increasing our confusion about educational outcomes.

The Influence of Competing Visions of Democracy on Public Education

Strike (1998) argued that there were three dominant and competing visions of democracy affecting visions of education and accountability. The three are democratic nationalism, liberal pluralism, and democratic pluralism. In the following pages we discuss each vision and its implications for education and accountability.

Democratic Nationalism

Democratic nationalism "sees the civic role of the schools as the transmitter of a distinct national culture and believes that this culture is connected to the maintenance of liberal democratic institutions" (Strike, 1998, p. 202). This view seems to us consistent with Horace Mann's vision of the common school, "that if children from a variety of religious, social-class, and ethnic backgrounds were educated in common, there would be a decrease in hostility and friction among social groups" (Spring, 1997, p. 97). This view is generally associated with cultural conservatism and is exemplified by the writings of Doyle (1997) and Hirsch (1998).

A recent and related view shifts the emphasis from cultural conservatism to free-market conservatism. Kuchapski (1998) describes those who embrace this view as "technological liberals." Technological liberals see the task of the school as preserving our national culture specifically by preparing students to ensure America's status amid global economic competition. Kuchapski maintains that technological liberalism is

"influenced by conservative communitarian (social conservative) thought and accepts that individuals are unequal [and should be] governed by command and obedience based on relationships of legitimate authority" (1998, p. 190). She further ascribes to technological liberals the belief that "knowledge and curriculum content can be broken down into 'micro outcomes' that eventually lead to more significant 'exit outcomes'" (McKernan, cited in Kupchapski, p. 192). Thus accountability systems in this worldview will emphasize standardized tests. Kuchapski goes on to say, "Technological liberals reject a dependence on teacher-based testing because of their [sic] bias and their [sic] potential for poor-quality assessments" [p. 193]).

Furthermore, if content coverage can be mandated at a national or state level (to ensure that that students receive common competencies), then tests can be constructed to represent that content; the tests can be administered to everyone in a standardized fashion; and results can be compared across time and across location. Once standards are adopted, and tests are in place, there is little room for debate. The threat of sanctions from state education agencies and of humiliation by the news media can cause educators to concentrate more on meeting standards than on questioning their validity. The intent is, in the words of Macpherson, Cibulka, Monk, & Wong "to prevent alternative interpretations of the situation" (1998, p. 211).

Liberal pluralism

Strike's second view of democracy (1998, pp. 199-200) is at the opposite end of the spectrum from democratic nationalism. This is "liberal pluralism" and it emphasizes the supreme right of each individual "in association with like-minded others" to pursue a selected vision of happiness. As Strike describes it, in liberal pluralism local

communities are largely unanswerable to any larger entity. Governments should regulate individuals' goals and actions solely in the light of John Rawls' two principles of justice:

1. Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of basic liberties for all.
2. Social and economic inequalities are to be arranged so that they are both (a) to the greatest benefit to the least advantaged . . .and (b) attached to offices and positions open to all under conditions of fair equality of opportunity (Rawls, cited in Strike, 1998, p. 199).

Strike (1998) argues that liberal pluralism de-emphasizes the civic virtues of willingness to engage with others of different beliefs, and to participate in deliberation with others. Strike sees liberal pluralism even as permissive of groups that choose to separate themselves from the larger society, e.g., the Amish.

We believe that accountability in liberal pluralism would rely on "teacher assessments of student work" because "teachers, in consultation with parents and students, are considered the best judges of student progress" (Kuchapski, 1998, p. 193). Decision-makers in such a context might well prefer (to use Patton's words) "soft data about an important question [rather] than hard data about an issue of minor relevance" (1997, p. 250). Educators dedicated to the rigor of national standards, assessment instruments of known psychometric properties, and cross-population comparisons might be uncomfortable with what passes for accountability in such a milieu. Sullivan's (1998) research represents for us the first attempt to investigate evaluator job satisfaction in light of competing demands for accountability.

Democratic pluralism

We associate Strike's (1998) third philosophical position, democratic pluralism, with John Dewey and his unrelenting emphasis on democracy (and therefore education) as "a shared process of inquiry" where "Democracy . . .is not a state; it is more a process, and its rules must be under continual scrutiny, revision, and creation" (Noddings, 1995, p. 35). Thus Strike sees democratic pluralism as different from democratic nationalism because democratic pluralism's emphasis is less on the academic content handed down to students than on the process by which content comes to be valued. Dewey disqualified all bodies of knowledge from having unquestionable validity, including the revered classical philosophies in the cultural conservatives' canons. "The very things that made the great systems objects of esteem and admiration in their own socio-cultural contexts, [their relevancy,] are . . .the very grounds that deprive them of 'actuality' in a world whose main features are different to an extent indicated by our speaking of the 'scientific revolution,' the 'industrial revolution,' & the 'political revolution' of the last few hundred years" (Dewey, 1948, pp. vii-viii).

Democratic pluralism differs from liberal pluralism as well, because democratic pluralism puts less emphasis on individual freedom as the sole determiner in the pursuit of happiness. "The goods that constitute a good life ought to be products of reasoned and collective deliberation, not just of free choice" (Strike, 1998, pp. 200-201). Collective scrutiny and revision become the essential goods to promote for education in a democracy.

Accountability in democratic pluralism would focus on whether education was fostering in students the "values and capacities that make democratic deliberation

possible" in a climate of "non-repression and nondiscrimination" (Gutmann, cited in Strike, 1998, p. 201). We can speculate on how democratic pluralists would view the accountability mechanisms considered by advocates of the other two views, democratic nationalism and liberal pluralism. We suspect that democratic pluralists value centralized goal setting only when it is a product of regular inclusive deliberations. Since it is the process of arriving at goals, rather than the goals themselves, that is at issue, the democratic pluralists would not want to let the centralized setting of goals inhibit discussion of the goals' validity or appropriateness.

Speculating further, we think democratic pluralists would be open to use both alternative assessments (because alternative assessments they are used to monitor processes of learning as well as outcomes), and standardized tests (because we think someone involved in the deliberations would appreciate their psychometric benefits). However, we see the narrowing of the goals of education to good test scores as abhorrent to democratic pluralists. Furthermore, we believe democratic pluralism entails ongoing discussion of the effectiveness and appropriateness of both types of assessments.

Technology's Role in Different Versions of Accountability

We cited above Dewey's reference to the effects of the scientific, industrial, and political revolutions. He did not live to consider the technological revolution. The most important aspects of this most recent revolution are the wide availability of computers with speed and storage space unimaginable twenty years ago, incredibly powerful and increasingly user-friendly software for data manipulation and reporting, and communication systems that allow more people to share more kinds of information than ever before.

It is not obvious whether this technology and its applications are more compatible with one view of democracy than another. Commentators take various positions on the issue, including the position that technology will do as much to foster totalitarianism as democracy. Winner (1992) offered as examples of the democratizing effects of technology events in the late Soviet Union where "Within the boundary-busting age of small portable computers, copying machines and satellite television, it was no longer possible to control information in a highly centralized Stalinist manner" and to protests in China where "During the peak of the Tiananmen Square demnstrations, support from around the world poured in via fax machine, a device whose use had quickly spread during the late 1980s" (p. 2). Then, like a dash of cold water, he reminded us that "Chinese authorities had been able to round up leaders of the demonstration by tracing the destinations of fax transmissions" (p. 2). In light of these extremes, we want to consider the place of technology in each view of democracy and accountability.

Democratic Nationalism

Given democratic nationalism's comfort with authoritative sweeping definitions of what is good for all students and (at least in its economic-conservative version) its propensity for standardized comparisons, we see it as compatible with centralized information systems. Its approach seems naturally to call for technology applications that facilitate standardized data gathering and examination. Meeting accountability demands requires information collection, analysis, and reporting about a large number of sites. We argue that basing accountability systems on the assumptions of democratic nationalism may lead to practices consistent with an earlier version of data processing, described by Farwell, Kuramoto, Lee, Trauth, & Winslow (1992). That version relied on

centralized systems, large mainframe computers, and information system staff with high degrees of technical skill, and (at least in some times and places) a certain aloofness and impunity within the organization.

Democratic liberalism

We believe that the information systems compatible with the democratic liberal view of accountability would be small scale and customized to fit the needs of the community. The stand-alone personal computer with user-friendly software to store, manipulate, and report information on assessments valued by the community would be the hallmark of this view. This is not to say that there would be no room for information system professionals. Users would still need experts, but users would come to see the experts as obligated to help them get the information and the types of reports they want. It is likely that producers and processors of accountability data would feel pulled in different directions by the competing (and increasingly strident) demands of users within the organization. The aloofness and impunity of an earlier time would no longer be supportable. Information systems experts would have to adapt to an organization in which their human-relations skills and administrative abilities were as essential as their technical skills.

Farwell et al. (1992) argued that a similar development was already occurring in business and industry, driven not by views of democracy, but by users' increased information needs and the availability of technology. Trauth, Farwell, & Lee (1993) documented that information systems professionals in business and industry were de-emphasizing technical skills as prerequisites for their roles and placing more emphasis on human relations skills and administrative abilities. Farwell, et al. (1992) questioned

whether universities preparing information systems workers were aware of this shift in emphasis and adapting their preparation programs accordingly. Delfin (1995) surveyed technology directors in school districts larger than 15,000 in the United States and found an even more pronounced shift in emphasis. She also noted that universities should be adjusting preparation programs in accordance with her these findings.

Democratic pluralism

We expect democratic pluralists to develop accountability systems by requiring in Bredeson's words "educators to engage in important conversations about teaching and learning frequently, continuously, concretely and precisely" (1995, p. 60). Therefore we think they would be drawn to e-mail, list serves, bulletin boards and web pages. It is the facilitation of communication that they would value in the technological revolution because they want to promote the free exchange of ideas. They would reject those technologies that discourage "alternative interpretations" of situations. Finally, we think they would favor software that enabled data analysis and display so that conversations about effectiveness would be anchored in empirical materials.

Technology as Accountability's Siren Song

The technological revolution provides powerful means to access data and produce varied information enabling different visions of democracy to be played out in accountability systems. However, the ability to produce varied information can cause confusion, over and above that due to competing visions of democracy, as contradictory findings emerge when the complexity of educational outcomes are more fully examined. Leaders in education can become mesmerized by the ability of computers to crunch numbers and begin to think that, "if it can be done, then it should be done." For example,

technology has enabled data disaggregation to an extent unthinkable in the recent past. Data disaggregation has the potential to foster critical analyses and discussions of equity. But the capability to disaggregate can also foster the proliferation of more reports than people can make sense of. The ability to analyze data in finer and finer detail, enables us to examine standardized test data first by subtest, then by objective, and finally down to the item level. However, the ability of information about different units of analysis does not insure that information users understand the information presented or that they can appreciate the meaning of conflicting information that emerges as the analyses become more complex.

One response to life in an environment of high stakes testing is to implement "mock-testing," administering a practice version of the real test earlier in the year. Then people begin to wonder if the mock-test data shouldn't be disaggregated also. The pressure builds on information-system staff to produce more and more reports, not necessarily because a decision-maker needs empirical support, but because of a sort of suspicion that more data might come in handy somewhere. This is another reason why Sullivan's (1998) study of evaluator job-satisfaction is relevant. We fear that all this may so concentrate educators' attention on details that it distracts them from educational concerns, not to mention concern with any vision of democracy. While leaders may speak with pride of being "a data-driven organization", staff wonder wistfully what it would be like to work in an "idea-driven organization."

This is not to suggest that only educational leaders become enamored with the excessive data access and information production. Teachers ask for CD ROMS to store student portfolios before they have any notion of how the portfolio data will be

transformed into information to support instruction. Architects of web sites proclaim how wonderful it will be when some relatively trivial data will be accessible to everyone without regard for the user's ability, or inability, to accomplish the transformation of data into meaningful information.

Implications for Preparing Future Leaders

Rather than taking a position among competing visions of democracy, education, or accountability, we suggest that an unexamined educational goal is not worth pursuing. Students of educational administration ought to be made aware that there are competing visions and that there are opportunities to foster consistency or confusion among those visions. We accept Littrell & Foster's (1995) concept of "'administrative action' which suggests that human agents can, in fact, influence and control events through the *actions* that they take, and that human agents do indeed make a difference in the conduct of local affairs. Such actions, performed by human agents, can be meaningful or meaningless" (p. 37).

Therefore, we aspire to prepare educational leaders who will foster meaning in educational organizations. The power of technology to transform data into useful information must not be lost in the acquisition of technical skills that can become the focus of technology instruction. While technology applications are now so flexible that the possibility of an almost infinite variety of information can be produced, our preparation of educational leaders should be focused to encourage them to adopt an active role in making discriminating judgements about what information will support meaningful analysis of educational outcomes. While in the past our ability to examine the complexity of educational outcomes was limited by the information systems

capability to produce desired information in a timely manner, we now face a contradictory challenge; our limited human capability to make meaning of the increasingly complex analyses of educational outcomes that are available to us.

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